

## **Appendix B**

Commitments for New and Continuing Project  
Actions from Consultation on Implementation  
of the CVPIA and Continued Operation and  
Maintenance of the CVP

## **Commitments for New and Continuing Project Actions**

The biological opinion for the implementation of the CVPIA identified numerous ongoing and new commitments made by the Service and Reclamation. These commitments are applicable to the renewal of the Friant Division and Cross Valley Canal water contracts. It is assumed that these commitments and those described in the Project Description will be fully implemented. The commitments are categorized in eight sections as follows:

- A. Commitments Associated with Implementation of the CVPIA,
- B. Commitments Associated with Long-term Renewal of CVP Water Service Contracts,
- C. Commitments for Activities with CVP Water and/or Facilities,
- D. Commitments Associated with CVP Conveyance and Storage,
- E. Commitments Associated with Operations and Management Planning,
- F. Commitments Associated with Conservation Programs,
- G. Commitments Associated Drainage, and
- H. Commitments Associated with General Consultation Processes.

It is also assumed that Reclamation and the Service will obtain funding sufficient to implement the following commitments, as necessary, to implement this biological opinion.

If these commitments are not implemented, or new information becomes available, consultation would be reinitiated at the programmatic-level to ascertain how the lack of implementation of any actions, or new information, affects the evaluation of effects upon listed species associated with the overall implementation of the suite of actions being considered and the subsequent conclusions made in this biological opinion.

It is critical that these commitments be considered in any future consultations regarding Reclamation and Service actions because they are an essential part of the Environmental Baseline condition. Proper evaluation of the incremental effects of Reclamation and Service actions cannot be undertaken without a proper accounting of these measures and provisions. Subsequent tiered consultations addressing future actions or programs carried out by Reclamation (e.g., contract renewal) shall consider what incremental effect, if any, such action or program causes in addition to the effects included in the existing environmental baseline and not impacts that may result from past actions of operation and maintenance of the CVP.

### **A. Commitments Associated with Implementation of the CVPIA**

The CVPIA includes numerous provisions, which are specifically designed to address past effects of the CVP by restoring species and habitat.

*Anadromous Fisheries Restoration Activities. (§3406(b)(1))* [Lead Agency: Service]

Reclamation and the Service will continue to implement the Anadromous Fisheries Restoration Program consistent with the plan developed for that program and as defined in the proposed

alternative described in section I. Implementation of the CVPIA.

The CVPIA requires that a program be developed which makes all reasonable efforts to ensure that, by the year 2002, natural production of anadromous fish in Central Valley rivers and streams will be sustainable, on a long-term basis, at levels not less than twice the average levels attained during the period of 1967-1991, also known as the Anadromous Fish Restoration Program. This goal does not apply to the San Joaquin River between Friant Dam and Mendota Pool, for which a separate program is authorized under subsection 3406(c) of the CVPIA. The programs and activities authorized by this section shall, when fully implemented, be deemed to meet the mitigation, protection, restoration, and enhancement purposes established by subsection 3406(a) of the CVPIA. In the course of developing and implementing the AFRP, all reasonable efforts shall be made consistent with the requirements of section 3406.

The AFRP will give first priority to measures, which protect and restore natural channel and riparian habitat values through habitat restoration actions, modifications to CVP operations, and implementation of the supporting measures mandated by the CVPIA. The AFRP will be reviewed and updated every five years and will describe how the Secretary intends to operate the CVP to meet the fish, wildlife, and habitat restoration goals and requirements set forth in the CVPIA and other project purposes.

*Habitat Restoration Program (Section 3406 (b) (1) other).*

*[Lead Agencies: Reclamation and Service]*

Reclamation and the Service commit to develop and implement the Habitat Restoration Program, as defined in the proposed alternative described in section I. Implementation of the CVPIA. Reclamation and the Service commit to request adequate funds be allocated to the (b)(1) "other" Program to protect and enhance ecosystems of listed species and to support recovery of listed species.

Habitat conservation projects that address this "other" mitigation component will be identified during the CVPIA implementation process. Specifically, this program will be designed during, but not limited to, the following activities: (1) ESA, Section 7 consultation for CVP contract renewals; (2) short- and long-term conservation programs being developed as a result of prior consultations (CVP Conservation Program); (3) the CVPIA-PEIS (environmental analysis under NEPA identified several important areas of wildlife conservation needs of both endangered species and other wildlife and ecosystem resources); and (4) implementation of other CVPIA activities. Representative projects include identification, protection, and restoration of habitat suitable for conservation of native species in areas impacted by the CVP.

The (b)(1) "other" Program has been based on the ranking of habitats and species of concern, the assessment of factors limiting native fish, wildlife, and associated habitats, and geographic areas where those habitats, species, and factors converge to the greatest degree. This will not be to the

exclusion of other concerns or opportunities, but has been Interior's emphasis. Species and habitat prioritizations are being reevaluated throughout implementation of the CVPIA, through regular prioritization meetings between Service, Reclamation staff, and DFG and yearly critical needs analysis. The critical needs analysis will be a collaborative effort between Reclamation and the Service and will include close coordination with DFG.

Habitats or ecosystems known or believed to have experienced the greatest percentage decline in quantity and quality since construction of the CVP, and whose impacts can be attributed, at least partially, to CVP construction and operation, will be a focus for the (b)(1) "other" Program. Populations of native species impacted by the CVP, not specifically addressed in other portions of section 3406 of the CVPIA, will be addressed in the (b)(1) "other" Program.

*Management of Dedicated Yield. (§3406(b)(2)) [Lead Agencies: Reclamation and Service]*

Reclamation and the Service have been and will continue to implement the management of water dedicated under section 3406(b)(2) of the CVPIA as defined in the proposed alternative described in section I. Implementation of the CVPIA, and consistent with Interior's *Decision on Implementation of Section 3406(b)(2) of the Central Valley Project Improvement Act*, released on October 5, 1999.

An annual amount of 800,000 acre-feet of CVP yield will be dedicated and managed by Reclamation and the Service for the primary purpose of implementing the fish, wildlife, and habitat restoration purposes and measures authorized by the CVPIA; to assist the State of California in its efforts to protect the waters of the San Francisco Bay/Sacramento-San Joaquin Delta Estuary; and to help meet such obligations as may be legally imposed upon the CVP under state or federal law following enactment of the CVPIA, including but not limited to additional obligations under the federal Endangered Species Act. Anticipated biological benefits for anadromous fish and other species include better instream temperatures for incubation and juvenile rearing, suitable migration conditions, and direct restoration of instream, riparian, wetland, and estuarine habitat.

The water will be in addition to the quantities needed to implement Level 2 refuge water supply described in section 3406(d)(1) and in addition to all water allocated to the Trinity River pursuant to section 3406(b)(23) for the purposes of fishery restoration, propagation, and maintenance, and will be supplemented by all water that comes under the Secretary's control pursuant to subsections 3406(b)(3), 3408(h)-(i), and through other measures consistent with subparagraph 3406(b)(1)(B). The water will be managed pursuant to conditions specified by the Service after consultation with Reclamation and DWR and in cooperation with DFG.

Operation of the CVP is coordinated between Reclamation and the Service for management of the 800,000 acre-feet of CVP yield made available under the CVPIA, and will remain consistent with the *Decision on Implementation of Section 3406(b)(2) of the Central Valley Project Improvement Act*, released on October 5, 1999. Deliveries of the water may be reduced up to 25 percent

whenever reductions due to hydrological circumstances are imposed upon agricultural deliveries of CVP water. Reductions will not exceed in percentage terms the reductions imposed on agricultural service contractors. Delivery of this water will not require the project to be operated in a way that jeopardizes human health or safety. If the 800,000 acre-feet of water dedicated for fish and wildlife enhancement, or any portion thereof, is not needed for the purposes of this section, such water will be made available for other project purposes.

*Supplemental Water Acquisition Program. (§3406(b)(3)) [Lead Agencies: Reclamation and Service]*

Reclamation and the Service will continue to implement the Supplemental Water Acquisition Program consistent with guidance provided under CVPIA and as defined in the proposed alternative in section I. Implementation of the CVPIA.

The Supplemental Water Acquisition Program is to develop and implement a program (in coordination and in conformance with the plan required under the AFRP that is described in section 3406(b)(1)) for the acquisition of a water supply to supplement the 800,000 acre-feet of water that is dedicated in section 3406(b)(2) for fish and wildlife purposes, and to fulfill the obligations for Level 4 refuge water supply established in section 3406(d)(2).

The water acquired through the Supplemental Water Acquisition Program will: increase restoration benefits for anadromous fish species provided by dedicated water; assist in reaching Level 4 refuge water supply; provide benefits to wetlands, adjacent terrestrial habitats, and estuarine areas; and furnish additional benefit to wildlife and resident and estuarine fish species. The program will identify how Interior intends to utilize the following options to acquire supplemental water: improvements in or modifications of the operations of the project; water banking; conservation; transfers; conjunctive use; and temporary and permanent land fallowing, including purchase, lease, and option of water, water rights, and associated agricultural land.

*Other 3406(b) Programs.*

Reclamation and the Service will continue to implement the CVPIA consistent with plans developed for associated programs and as defined in the proposed alternative described in section I. Implementation of the CVPIA.

In addition to the principal programs outlined above, CVPIA provides a number of other specific measures to improve the condition of species or habitat. In each case, Reclamation, the Service, and other Interior Agencies are implementing or developing programs to implement these

provisions. A listing of programs that are being implemented to specifically benefit fish and wildlife is provided below. Descriptions of these programs are provided in section I, Implementation of the CVPIA, of this Project Description.

- *Tracy Pumping Plant Mitigation (§3406(b)(4))*
- *Contra Costa Canal Pumping Plant Mitigation (§3406(b)(5))*
- *Shasta Dam Temperature Control Device (§3406(b)(6))*
- *Meet Flow Standards for Anadromous Fish (§3406(b)(7))*
- *Pulse Flows for Anadromous Fish (§3406(b)(8))*
- *Eliminate Flow Fluctuation Losses (§3406(b)(9))*
- *Modify Red Bluff Diversion Dam (§3406(b)(10))*
- *Coleman NFH Restoration and Keswick Fish Trap Modification (§3406(b)(11))*
- *Clear Creek Fishery Restoration (§3406(b)(12))*
- *Gravel Replenishment and Riparian Restoration (§3406(b)(13))*
- *Delta Cross Channel and Georgiana Slough (§3406(b)(14))*
- *Construct Delta Fish Barrier (§3406(b)(15))*
- *Comprehensive Assessment and Monitoring Program (§3406(b)(16))*
- *Anderson-Cottonwood Irrigation District Fish Passage (§3406(b)(17))*
- *Restore Striped Bass Fishery (§3406(b)(18))*
- *Shasta and Trinity Reservoir Carryover Storage Studies (§3406(b)(19))*
- *Glenn-Colusa Irrigation District Pumping Plant (§3406(b)(20))*
- *Anadromous Fish Screen Program (§3406(b)(21))*
- *Agricultural Waterfowl Incentives Program (§3406(b)(22))*
- *Trinity River Fishery Flow Evaluation Program (§3406(b)(23))*

#### **B. Commitments Associated with Long-term Renewal of CVP Water Service Contracts**

1. Long-term contracts will be renewed, and Reclamation will complete tiered site specific consultations with the Service. No CVP water will be delivered or applied outside current contract service areas until either formal or informal consultation, as appropriate, is complete. Once formal site specific consultation has occurred that is in compliance with this opinion, it is assumed that changes in land-use practices, and impacts to listed and proposed species, in the districts have been addressed.
2. During the contract renewal process, a needs-analysis to determine beneficial use of CVP water will be completed, and all contract renewals will be subject to Section 7 consultation procedures and the NEPA process. A site specific biological assessment, to determine potential impacts of using CVP water on Federal and State listed and proposed species, will be completed for individual water districts or for groups of districts in close proximity to one another. The Service's SFWO Endangered Species Division will provide recommendations to Reclamation on the appropriate level of ESA consultation and *conservation measures* needed.

3. Reclamation also will continue to consult with the Service on a drainage-basin basis or ecosystem-level strategy for addressing new and amended water contracts outside and/or inside the American River watershed, including execution of diversion agreements associated with American River Water Forum.

4. Reclamation and the Service will write a joint letter to the water districts, any member agencies, Planning Departments of cities or counties within the districts using CVP water, and other responsible parties regarding requirements under the ESA. The letter will include: (1) a discussion of Reclamation's need to ensure that CVP water is not used in a manner which could jeopardize the continued existence of any listed species or result in the destruction or adverse modification of designated *critical habitat*, and (2) an explanation of the prohibitions described under Section 9 of the ESA in regard to *take*. The letter will discuss the appropriate protection measures as described here and in subsequent contract renewal consultation and will be completed within 60 days of execution of long-term contracts.

5. Conservation strategies will be in place for the districts or areas receiving CVP water. The types of strategies that could be accepted are: *Habitat Conservation Planning* as described in section 10(a) of the ESA; programmatic land management actions that include protection of listed and proposed species; requirements resulting from site specific Section 7 consultation; or an expansion of the existing CVP Conservation Program that adequately compensates for the direct and indirect effects of increased water delivery to an area.

6. Reclamation will, subsequent to a determination of *may affect* to listed species and/or adverse modification to designated *critical habitat* in consultation with the Service's SFWO Endangered Species Division, consult on all Federal actions that result in changes in purpose of use for CVP water contracts, including changes from Agriculture to Agriculture/Municipal and Industrial purposes.

7. The Service and Reclamation will work together to convey information to the water districts, and individual water users (as appropriate), on listed species needs. Reclamation will establish an outreach and education program, in collaboration with the Service, to help water users integrate implementation of the CVPIA and requirements of the contract renewal process as it relates to the ESA.

8. Interior will work closely with the water users, providing them maps of listed species habitats within their service-areas and guiding them through the consultation process to address site

specific effects. Reclamation may encourage CVP contractors to complete HCPs encompassing the affected areas.

9. Reclamation and/or the Service will develop provisions for compensation for the loss of endangered species habitat resulting from the direct or indirect effects of a Reclamation action not covered under prior biological opinions that occur within the CVP service areas from the date of

this opinion until completion of either: (a) contract area specific Section 7 consultation, (b) any other required site specific Section 7 consultation on the effects of the conversion in question, or (c) the completion of an HCP that encompasses the area in question.

10. Reclamation and CVP contractors will comply with all applicable opinions related to the CVP (listed on pages 1-11 to 1-12). Flow standards that form the environmental baseline of the 1995 OCAP biological opinion will be met, and Reclamation will take no discretionary actions (e.g. new contracts, contract amendments, facility construction) that would incrementally increase diversions and alter hydrologic and environmental conditions in the Delta until any required consultation is reinitiated and completed. (Appendix L, letter to the Service and NMFS from Reclamation, dated October 29, 1999.)

11. Contractors are required to conform with any applicable provisions of any biological opinions addressing contract renewal so as to prohibit the use of CVP water that results in unauthorized *take* or conversion of wildland habitat determined to have the potential to be occupied by listed species, or violation of any terms of the contracts pertaining to the conservation of listed species. All contracts (or related biological opinions) will also stipulate Reclamation will not undertake any discretionary action allowing the delivery of CVP water to native habitat for listed species depicted on the maps attached to the 18-month notices unless clearance pursuant to the ESA has been obtained from the Service.

12. Reclamation, relative to all new and renewed contracts will informally consult with the Service's SFWO Endangered Species Division to determine the need for formal consultation prior to contract execution.

13. Reclamation will make certain that applicable measures to ensure ESA compliance for the renewal of CVP water service contracts are provided within the text of new and/or amended long-term water contracts and related actions.

14. Reclamation will provide information related to proposed new water assignments of Project water to the Service's SFWO Endangered Species Division prior to execution of the assignment.

### **C. Commitments for Activities Associated with CVP Water and/or Facilities**

*San Joaquin River Exchange Contractors.*

*[Lead Agency: Reclamation]*

Interior will work with the Exchange Contractors to develop *conservation measures*, as appropriate, for listed species. Interior will communicate and coordinate with the Exchange Contractors in determining how to address any effects to listed species, as necessary, through Section 7 or Section 10.



### *Sacramento River Diverters.*

[Lead Agency: Reclamation]

Interior will work with the Sacramento River Water Rights Settlement Contractors to develop *conservation measures*, as appropriate, for listed species. Interior will communicate and coordinate with the Sacramento River Water Rights Settlement Contractors in determining how to address any effects to listed species, as necessary, through Section 7 or Section 10.

### *Surplus Flood Flows Water Contract*

[Lead Agency: Reclamation]

Approval of each Surplus Flood Flows water contract will be conditioned with the following understanding: the Water Service Contractors will be notified that some types of activities require formal consultation with the Service. The intent is that irrigation activities not *affect* the presence of threatened or endangered species and that previously untilled land must not be tilled and put into agricultural production using this water. This water will not be applied to grassland or shrub land which has never been plowed or irrigated. If the land has been fallow for five consecutive years or more, it must be inspected for endangered species prior to contract approval.

Reclamation will continue to assure that no Surplus Flood Flows will be authorized if it has a significant adverse impact on the ability to meet fish and wildlife obligations under the CVPLA. The availability of Surplus Flood Flows will be based on consideration of many operational requirements including inflow to reservoirs, downstream capacity, and maintaining flows at Vernalis. At this time, none of the State, Federal, or private wildlife refuges located near Los Banos hold any permits to divert water from the river. Supplemental water for these areas will be provided by Reclamation through the Delta-Mendota Canal. The execution of Surplus Flood Flows contracts for San Joaquin River water will not interfere with Reclamation's obligations to deliver water to these refuges. If new construction or modification of existing Project facilities is needed to receive Surplus Flood Flow deliveries, that construction or modification project will receive separate environmental review.

### *Inclusions and Exclusions*

[Lead Agency: Reclamation]

Reclamation will provide the Service with documentation of its procedures for processing exclusions and conducting site investigations.

Reclamation will coordinate with the Service via the process described on page 2-40 on (a) any requested inclusions or exclusions from contract service areas, and (b) any water contracts or water deliveries involving Reclamation facilities within the Final PEIS study area for service areas that are not addressed in any existing biological opinion. This coordination will address all endangered species that may be affected by these actions.

#### *Other CVP Water-related Commitments*

[Lead Agency: Reclamation]

For Warren Act, water wheeling, and water transfers, Reclamation and the Service will establish a tracking program that assures compliance with the ESA.

Reclamation will continue to assure that no Warren Act type services will be provided if these services would have a significant adverse impact on the ability of Reclamation or the Service to meet fish and wildlife obligations under the CVPIA.

The effects of additional transfers (i.e., exceeding a cumulative 250,000 acre-feet annually) on delta smelt, as well as the indirect effects of all transfers on terrestrial species, have not yet been addressed and will undergo consultation as may be required when such transfers are proposed. Because of the high number of transfers that occur annually, the Service and Reclamation are collaborating on streamlining the consultation process to allow for expedited consultation on water transfers.

#### *Conjunctive Use Project Coordination*

[Lead Agency: Reclamation]

Use of CVP water supplies to recharge aquifers can enhance stream flows and wetlands by minimizing seepage into groundwater systems. Within the affected groundwater basin, CVP water deliveries can also allow increased agricultural or urban development using groundwater (either within or outside designated service areas) by directly recharging the aquifer or indirectly freeing groundwater supplies for other users. Future conjunctive use projects involving Reclamation will be coordinated with the Service's SFWO Endangered Species Division to address effects to listed species.

#### **D. Commitments Associated with CVP Conveyance and Storage**

1. Reclamation has committed to reinitiate consultation on CVP-OCAP so that CVP operations can be re-evaluated in the context of current conditions.
2. Reclamation and the Service will coordinate, for ecosystem-level planning purposes relative to water deliveries to CVP contractors. Reclamation will provide information to the Service on annual deliveries each year, prior to or concurrent with informing the water districts of their allocation amounts. However, it is understood biological opinions for OCAP (1-1-94-F-70) and Los Vaqueros (1-1-95-F-117 and 1-1-95-F-134) are in place, and at no time can the total amount of these CVP deliveries exceed the total consolidated amount considered in these opinions. Further, individual tier water contract renewal processes will further address issues related to specific contract quantities as a part of their consultations under Section 7 the ESA.
3. If Reclamation determines effects, including interrelated or interdependent effects, resulting from these CVP deliveries *may affect* federally listed species and/or their designated *critical*

*habitat*, Reclamation will request consultation under Section 7 of the ESA. If, after review of annual delivery information provided by Reclamation (#2 above), the Service believes effects related to these CVP deliveries *may affect* federally listed species and/or their designated *critical habitats*, the Service will request Reclamation to consult under Section 7 of the ESA.

4. The effects of additional transfers (i.e., exceeding a cumulative 250,000 acre-feet annually) on delta smelt, as well as the indirect effects of all such transfers on terrestrial species, have not yet been addressed will undergo formal consultation. Because of the high number of transfers that occur annually, the Service and Reclamation are collaborating on streamlining the consultation process to allow for expedited consultation on water transfers.

#### **E. Commitments Associated with Operations and Maintenance Planning**

1. Reclamation will coordinate closely with the Service during development and implementation of all O&M Plans and Resource Management Plans.

2. A plan to prevent *take* associated with operations and maintenance (O&M) of Reclamation facilities, and to help reduce *take* associated with pest control activities by farmers receiving Federal water will be developed and implemented. Reclamation will implement O&M plans for *take* avoidance as described in Appendix F of this biological opinion throughout the CVP. Reclamation will continue to work with California Department of Pesticide Regulation to assure that pesticides are not used in or adjacent to the habitat of listed species, prior to completion of Section 7 consultation or an HCP. The Service will consult with EPA to ensure that label restrictions for pesticides address needs of listed species and are used accordingly.

3. Reclamation Area Offices are developing, or have developed, O&M Plans for use by managers and those in the field doing O&M work, for avoidance and minimization of impacts to listed species. In addition to the Plans, O&M manuals are used to provide staff-level guidance on implementation of O&M Plans. These manuals are used to address listed and proposed species found within each office's jurisdiction, and include *take* avoidance measures for listed species. The South-Central California Area Office O&M Plan and manual are completed. The Central California Area Office and Northern California Area Office are currently developing manuals based on *take* avoidance measures in Appendix F. Each area office will combine the existing O&M manual with *take* avoidance information in Appendix F, in order to develop site specific documents for each area office, increase the number of species covered, and improve coverage for facilities in the Sacramento Valley. *Take* avoidance guidance will be updated as new information on the species becomes available and as new species are listed.

4. Reclamation will identify and seek to eliminate invasive species of plants and animals on Reclamation lands that have the potential to severely *adversely affect* native habitat. In addition, Reclamation, in cooperation with the water districts, will be responsible for the development and implementation of Integrated Pest Management Plans to reduce the use of pesticides on Reclamation lands and to further reduce the possibility of *adverse impact* to threatened,

endangered, and species of concern. Management direction for invasive species and Integrated Pest management will be included in the O&M Plans.

5. The O&M Plans and associated Manuals will also contain guidance to reduce impacts from earth moving, minor construction, erosion control, pest control, weed abatement, etc. on wetlands and sensitive, threatened, and endangered species.

Examples of additional information these O&M Plans and Manuals could contain is as follows:

- descriptions of various mitigation and *conservation measures* that would be implemented to reduce anticipated project related impacts related to O&M to a less-than-significant level and eliminate effects to sensitive, threatened and endangered species and wetlands.
- commitments to monitor construction sites to assess mitigation success according to defined success criteria and the provision of yearly reports to the Service, California Department of Fish and Game (DFG), and the Corps.
- establishment of and agreement to, success criteria for all mitigation and *conservation measures* to be implemented. If the success criteria are being met after three years of monitoring, no additional monitoring would be necessary. If the success criteria are not met, Reclamation would consult with the Service to determine any further monitoring needs.

6. As *take* avoidance measures are developed by the Service and DFG, they will be distributed and implemented on Reclamation lands as well as made available to private landowners receiving Reclamation water. This information will also be provided to the Department of Pesticide Regulation, where it may be shared, at their discretion, with certified applicators and licensed users.

#### **F. Commitments Associated with Conservation Programs**

Reclamation and the Service have, and will continue to implement a number of *conservation measures* designed to improve the conditions of threatened and endangered species or designated *critical habitat*. These *conservation measures* have been or will be undertaken pursuant to Reclamation and the Service's discretionary authorities, including, but not limited to, the authority provided by Section 7(a)(1) of ESA. The Service and Reclamation will work together to ensure that existing wildlife conservation programs are funded adequately and support the purpose of the ESA.

*Wetland Development Program.*

*[Lead Agency: Reclamation]*

Reclamation commits to continued implementation of the Wetland Development Program as funding and authorizations allow, and will continue to seek funding for this program annually.

The Regional Wetlands Development Program (Program) is funded to conduct wetland, riparian, and associated upland habitat protection, enhancement, and restoration activities on Reclamation

lands, and on lands that affect or are affected by Reclamation's operations or activities. In addition, the Program allows Reclamation's participation in planning, monitoring, surveys, and public education programs focused on environmental awareness toward issues that are associated with Reclamation's interests.

Actions taken through this Program generally involve a partnership of Federal, or State agencies, and/or non-profit environmental interest groups whereby, through grants or cooperative agreements, funds are transferred to the partner to provide desired services on a cost-shared basis.

Actions that have been accomplished under this program are varied. Numerous brood ponds have been established on 12 properties in the Sacramento Valley for waterfowl production, in partnership with DFG, the California Waterfowl Association, and others. These ponds were developed in marginal rice production areas, and will provide giant garter snake habitat. The Program has provided funds to Colusa National Wildlife Refuge to restore giant garter snake and waterfowl habitat, and has provided funds to the American River Conservancy to assist in purchase and management of habitat for the California red-legged frog. Additionally, considerable funds have been provided to many non-governmental agencies to promote educational and outreach activities (e.g., San Joaquin Audubon Society, American River Natural History Association, California Native Plant Society, Ducks Unlimited, California Waterfowl).

#### *CVP Conservation Program*

*[Lead Agency: Reclamation]*

Reclamation commits to continued implementation of the CVP Conservation Program as funding and authorizations allow. Reclamation and the Service will seek increased annual base funding of the CVP Conservation Program.

Reclamation and the Service developed the CVP Conservation Program as one of the means to make operation of the CVP compatible with objectives of the ESA. During the consultation on Friant Division water contract renewals, Reclamation and the Service agreed to work together to enhance the condition of listed and sensitive species. The Friant Biological Opinion included conservation recommendations that specified that Reclamation and the Service identify critical needs of the species found in that part of the San Joaquin Valley. With time it became clear that the list of conservation actions to be done changed each year with new information. At the time of the Interim Water Contract Renewal consultation, Reclamation and the Service agreed to reexamine annually the list of actions to be done and identify which ones had the highest priority. This would ensure that important actions were undertaken and that money would be used effectively to solve problems. The CVP Conservation Program Framework Document was written to confirm the strategy. All of the species in the area affected by CVP were included because spending decisions would be done most cost-effectively during the prioritization process. Participation by both agencies would ensure that the interests of Reclamation and the Service would be considered in all decision-making.

Under the Framework Document, the CVP Conservation Program is a joint Reclamation/ Service

Program developed and implemented by both agencies and DFG with Reclamation funding. The primary goal of the CVP Conservation Program is to meet the needs, including habitat needs, of threatened and endangered and special-status species in the areas affected by the CVP. The special-status species whose needs will be addressed by the CVP Conservation Program include primarily federally listed species. In addition, species that are candidates or are proposed species for Federal listing, as well as other species of concern, will benefit from the Program if they have high-priority biological needs. The Conservation Program would be applicable to actions that would benefit even a single, specific species, if a declining trend were likely to occur due to any significant degree from the effects of ongoing actions of CVP, including those species that only began declining since 1992.

The Conservation Program, along with other initiatives (e.g., (b)(1) "other" Program, Land Retirement Program, Refuge Water Supply, and the Wetland Development Program), are intended to ensure that the existing operation of the CVP and implementation of the CVPIA occur in a manner compatible with the continued existence and recovery of listed or proposed species, or designated or proposed *critical habitat*.

The implementation process for the CVP Conservation Program is guided by the following principles:

- Implementing actions will respond directly to biological needs;
- Highest priority needs will generally be addressed first; and
- Priorities and needs, and thus the implementation plan, will change over time.

The CVP Conservation Program will identify actions for implementation mainly by synthesizing existing information about needs and specific actions rather than by duplicating other efforts. A prime example of existing information is an approved recovery plan. Recovery plans contain implementation schedules of actions needed to conserve the species and background material to aid preparation of scopes of work. However, for species that do not yet have a recovery plan,

where there are some scientific data gaps or where existing information is not available, the CVP Conservation Program may develop new information.

#### *Comprehensive Mapping*

*[Lead Agency: Reclamation]*

Reclamation and the Service commit to developing a Comprehensive Mapping Program, consistent with existing biological opinions including the Friant and Interim CVP contract renewals, to identify remaining natural habitats within CVP service areas and identify any changes within those habitats that have occurred between 1993 and 1999. Reclamation will seek funding for this program.

Within 18 months of this biological opinion, the three phases described below will be completed. Once the habitat is located and quantified, CVP Contractors and State and local agencies with

jurisdiction over land use planning decisions will be notified of the comprehensive three phase mapping strategy. Mapping will be used to quantify listed species habitat within the service area of the water districts.

Phase I - A 1993 landcover database or basemap will be developed using the best available existing landcover data and satellite imagery. Classification of land or habitat types represented in the CDF&G/Ducks Unlimited database will be used for wetland types, and WHR (Wildlife Habitat Relationships) classification types will be used for upland types. Classification types will be correlated with the National Biological Diversity Database for determining species habitats. As part of Phase I, a demonstration area will be chosen to develop and test methods, procedures, and products.

Phase II - will determine areas of habitat change by comparing 1993 image data to year 2000 image data. Based on available GIS datasets and spectral change analysis, a preliminary change map will be created to guide sampling and remapping efforts in phase III.

Phase III - will create an updated landcover database representative of landcover and habitat conditions for year 2000. This process may include:

- Field sampling to determine the cause of change and identification of habitat types in change areas.
- Acquisition of large scale, orthorectified digital aerial photography for verification and remapping purposes.
- Additional mapping efforts in areas where existing datasets from 1993 are not adequate to meet the needs of this project.
- GIS analysis for habitat change monitoring

#### *Land Use Monitoring and Reporting Program*

*[Lead Agency: Reclamation]*

Reclamation commits to the development and implementation of a Land Use Monitoring and Reporting Program, as funding and authorizations allow. Reclamation will seek base funding for this program.

The Service and Reclamation will collaborate on expediting the generation of baseline conditions for this opinion. Reclamation will work with the Service to provide maps produced as a result of the Land Use Monitoring and Reporting Program as soon as technically possible, to CVP water districts and county planning departments including updates of any new data from the Service.

The Comprehensive Mapping Program will be implemented immediately to test and track, for the purpose of validating over the life of the project, the assumptions made in this biological opinion that the baselines of the species in Appendix B are stable or increasing.

Monitoring will be used to assess the condition and impacts of Reclamation actions on listed species. Reclamation and the Service are actively developing a monitoring strategy based on the comprehensive mapping program. The land cover database for year 2000, described in Phase III, will be revisited every 5 years for monitoring purposes.

One use of this program is that changes and trend in potential listed species habitat will be reviewed by the Conservation Program Technical Team and will be used to determine the effectiveness of the Conservation Program and other local planning efforts in protecting and recovering listed species. This will help focus conservation efforts on acquisition needs with the highest priority. In addition, the team will identify other priority needs that are not habitat related. As needs for information gathering or additional interagency coordination needs are identified, the Service and Reclamation will put programs in place or bolster existing programs to meet those needs.

Reclamation and the Service will use the best scientific and commercial information available, in conjunction with data from aerial photograph analysis to monitor trends in the environmental baseline for listed species. It is the ultimate goal of Interior to assure that listed species are being recovered. For any species affected by the CVP that are continuing to decline, the Service and Reclamation will immediately assess critical needs for the species and determine whether it is appropriate to expand the Conservation Program or implement other *conservation measures*. Any native habitat converted to agricultural or municipal/industrial use within the water service area without prior biological surveys, as required by Reclamation prior to the delivery of Reclamation water, will be evaluated to determine what mitigation measures will be required.

#### *Contingency Plans for Land Conversions.*

*[Lead Agency: Reclamation]*

Reclamation and the Service commit to working together to develop contingency plans for land conversions, and Reclamation will seek funding to implement these plans as appropriate.

Reclamation will establish and/or adopt a contingency plan to address conversions of potential habitat that have occurred in the absence of any required Section 7 consultation regarding any given Reclamation action. Reclamation will also work with the Service to develop/implement measures to help address such adverse land use changes that occur in CVP service areas but were not, or are not, subject to Section 7 consultation. The contingency plan(s) will address the means and funding to be used in acquiring, restoring, or otherwise protecting lands to compensate for the loss of listed species habitat. Reclamation recognizes that historic conversion of land in many cases cannot be directly linked to specific Reclamation actions. The purpose of these contingency plans is to address such conversions to the extent Reclamation can do so in a manner consistent with its statutory authorities. The plan will address compensation from the perspective of both



long term and temporary effects and will be developed, or substantially agreed upon, prior to contract renewal. In the event these plans cannot be completed prior to contract renewal, their effective date will nevertheless be the date of contract renewal.

*Interagency Coordination for Ecosystem Protection*

*[Lead Agencies: Reclamation and Service]*

Interagency coordination for ecosystem protection is expected to benefit listed species. Reclamation and the Service will continue to collaborate and consult informally on this action.

Reclamation and the Service will establish a coordination team to ensure that the programs described in this biological opinion further the purposes of the ESA and are consistent with this biological opinion. The coordination team will meet at least quarterly. This team will develop and implement an integrated planning process to coordinate CVP actions and other State and Federal actions under State and Federal laws to further the purposes of the ESA. Recovery of listed species, biological diversity, and ecosystem functions will be considered in Reclamation's planning processes. The team will evaluate *adverse effects* of CVP actions on listed species, species of concern, and their associated habitats, and identify *conservation measures* to protect species populations and habitats, and help avoid the necessity of listing additional species under the ESA.

#### **G. Commitments Associated with Drainage**

1.(a) Discharges into surface water bodies and waterways resulting from implementation of the CVPLA and continued operations of the CVP, under the control of Reclamation and/or the interrelated and interdependent effects of Reclamations actions, including deliveries to CVP water contractors, will comply with standards set in the Description of the Proposed Action for the biological opinion on the Environmental Protection Agency's Promulgation of Numeric Criteria for Priority Toxic Pollutants for the State of California; California Toxics Rule (CTR) (Service File No. 1-1-98-F-21), in accordance with applicable implementation plans.

1.(b) The Service will work with EPA to ensure implementation of protective criteria for listed species.

2<sup>8</sup>. All components of the San Joaquin Valley Drainage Program's Final Report that pertain to the CVP's contract service area will be implemented in a manner that does not preclude recovery of listed and proposed species. Specifically, selenium discharges into the San Joaquin River will not *preclude recovery* of listed and proposed species or adversely modify designated *critical habitat* that are using impacted waterways, e.g. the San Joaquin River and its tributaries and the Sacramento San Joaquin Delta. Interior will conduct monitoring to determine whether existing discharges are impacting recovery of listed species such as the Sacramento splittail, delta smelt, and giant garter snake, as identified below.

3<sup>1</sup>. Reclamation, in consultation with the Service and consistent with the Interim Contract Renewal biological opinion (1-1-F-00-0056), will implement a study to identify the sources of selenium contamination in the Grasslands, San Joaquin River, and south Delta estuary. The study will identify and quantify all known sources of selenium that contribute to contamination of water supplies to the Federal, State, and private wetlands of the Grasslands area, the San Joaquin River, and southern Sacramento-San Joaquin Delta. The study will include an analysis identifying and quantifying loads from known sources such as the Delta-Mendota canal pumping project, the Mendota pool group groundwater pumping project, and discharges into the San Luis Drain from Panoche Creek flood flows. Further, the study should provide information regarding ongoing efforts to reduce selenium in the Grasslands Area, other studies being conducted related to this venture, and any applicable reports from other investigations that have been completed (e.g., California Central Valley Regional Water Quality Control Board investigations).

4<sup>8</sup>. Reclamation, consistent with the Interim Contract Renewal biological opinion (1-1-F-00-0056), will implement a Service approved monitoring program to assess the effects of selenium loading within the San Joaquin River on aquatic listed species or their surrogates (including but not necessarily limited to, Sacramento splittail, Delta smelt, and giant garter snake) using the lower San Joaquin River and southern Sacramento-San Joaquin Delta. Such a program should determine tissue concentration for these species (or appropriate surrogates) collected from these areas. Initial data from this program will be made available to the Service to be used in the effects analyses of long term contract renewal on aquatic listed species and used to minimize *take*.

5. Additionally, other drainage options not considered under or consistent with the San Joaquin Valley Drainage Program will comply with the ESA.

#### **H. Commitments Associated with General Consultation Processes**

1. Reclamation and the Service commit to continued identification and resolution of issues associated with project actions in a timely manner.
2. As part of this CVP comprehensive Section 7 process, Reclamation and the Service commit to developing and implementing an agreement which includes protocols that will specifically address the integration of continuing project actions with actions meeting the needs of listed species, consistent with the requirements of the ESA.
3. Reclamation will implement the planning and communication measures, including the letter to

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<sup>1</sup> Reclamation and the Service are working jointly to implement this effort. Together, Reclamation and the Service are seeking appropriate funding and are refocusing and intensifying existing efforts, helping to identify any additional data needs not being addressed through existing drainage and drainage monitoring programs, and are helping to secure funding for additional needs that cannot be accomplished within the existing programs.

water users associated with contract renewals and new and amended contracts, described in the Project Description of this opinion.

4. Reclamation and the Service will continue to comply with the Coordinated Operating Agreement, the Bay-Delta Plan Accord, applicable biological opinions, and other agreements and with limitations on export and transfers in the biological opinions on OCAP.

5. Reclamation and CVP contractors will comply with all opinions related to the CVP (listed on pages 1-11 and 1-12).

6. Any site specific effects to listed species will be consulted upon following site specific analysis and prior to the effect, and the Service and Reclamation are adequately funded and staffed to complete tiered site specific consultations from this opinion and track implementation of conservation actions.

7. Implementation of, and conformance with, recovery plans will be an integral part of all site specific consultations.

8. Regarding future tiered actions, Reclamation and/or the Service will provide to the Service's SFWO Endangered Species Division the best scientific and commercial data available when initiating Section 7 consultations (fulfilling the information requirements specified in 50 CFR 402.14(c)) in order to facilitate and expedite the Service consultation process.

9. Prior to implementation of any new actions undertaken pursuant to the CVP or CVPLA (i.e., signing a FONSI or ROD), Reclamation and/or the Service, in coordination with the Service's SFWO Endangered Species Division, will assess the potential impact upon listed species that may be affected by these actions or any potential modification of designated *critical habitat*.

10. Reclamation and the Service will establish a process to facilitate the completion of consultations and to develop a more streamlined and efficient process to ensure compliance with both the regulatory aspects of the ESA and implementation of conservation and recovery activities. Reclamation and the Service will establish a coordination team to ensure that the programs described in this biological opinion further the purposes of the ESA and are consistent with this biological opinion. The coordination team will meet at least quarterly. This team will develop and implement an integrated planning process to coordinate CVP actions and other State and Federal actions under State and Federal laws to further the purposes of the ESA. Recovery of listed species, biological diversity, and ecosystem functions will be considered in Reclamation's planning processes. The team will evaluate *adverse effects* of CVP actions on listed species, species of concern, and their associated habitats, and identify *conservation measures* to protect species populations and habitats and help avoid the necessity of listing additional species under the ESA. To facilitate implementation and operation of this team the Service will designate a point of contact that will act as a nexus for all Reclamation ESA related coordination activities. This person will ensure the efficient dissemination of ESA related materials and will provide input to

Reclamation on status of ongoing consultations. Reclamation will designate a point of contact in each of its CVP Area Offices that can act to facilitate information transfer on ESA related activities. The purpose of this action is to facilitate information transfer, to ensure that the Service is aware of ongoing Reclamation actions, and that the Service has a method of expeditiously providing any comments and concerns.

11. In order to consistently address future consultation needs for the programs described here, the Service will provide the technical support to expedite tiered consultations and implementation of *conservation measures*. Reclamation and the Service will develop and implement a collaborative and integrated process to coordinate CVP actions and other State and Federal actions under State and Federal laws, to aid in recovery of listed species. Reclamation and the Service will establish a coordination team within 90 days of the date of this opinion, to design and implement this process and to ensure that the programs described in this biological opinion are consistent with this biological opinion and the ESA. The coordination team will meet at least quarterly. Coordination team guidance may result in future, tiered programmatic consultation or collaboration in local area planning<sup>2</sup>.

12. Reclamation and the Service are committed to continued progress on issues such as, but not limited to: incentive programs, joint efforts with DWR on common issues and striving toward common policy; collaborating with the California Department of Pesticide Regulation to share information pertinent to the protection, enhancement, or recovery of threatened and endangered species; implementation of CALFED; and pursuing common goals with other agencies, including local jurisdictions, water districts, Resources Conservation Districts, and Local Agency Formation Commissions.

13. The Service will continue to provide Reclamation with the most current *take* avoidance measures and *conservation measures*, in addition to any necessary *reasonable and prudent measures*. Reclamation and the Service will coordinate with all water districts and county planning offices, the California Department of Pesticide Regulations, and DWR to ensure consistency with Sections 2, 4, and 7 of the ESA. Reclamation and/or the Service will distribute the *take* avoidance measures and *conservation measures* in Appendices F and G to all water districts and county planning offices, the California Department of Pesticide Regulation, and DWR by March 1, 2001, and will continue to provide updates to these parties.

14. To implement long range planning and to assure efficient and effective implementation of CVPIA and ESA, Reclamation and the Service will continue coordination with the National Marine Fisheries Service (NMFS), California Department of Fish and Game (DFG), and California Department of Water Resources (DWR) on: (1) conservation actions needed to minimize the impact of the CVP on listed species and (2) developing a comprehensive evaluation process for actions that require further formal or informal consultation tiered from this opinion.

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<sup>2</sup> This coordination team is separate and distinct from the Conservation Program Technical team described on page 2-64, although some team members may be on both teams.

15. Reclamation is in the process of consulting with the Service regarding various operational and contractual changes within the American River basin. These changes will include new contracts, amended contracts, Warren Act contracts, land use easements, Folsom Dam long term reoperation for flood control, American River Water Forum actions, Placer County Water Agency pumps, and long term contract renewals. Reclamation also will continue to consult with the Service on a drainage basin basis or ecosystem level strategy for addressing new and amended water contracts outside of the American River watershed, including execution of diversion agreements associated with American River Water Forum.

16. In addition to commitments and conservation measures in this opinion, and within other consultations, Reclamation will develop, as appropriate, guidelines and policies that address: (1) conversion of listed species habitat prior to any required Section 7 consultation on Reclamation actions or assistance with implementation of an HCP, (2) indirect effects of groundwater recharge on listed species habitats inside and outside of water districts resulting from Reclamation actions, and (3) applications of CVP water outside of the place of use or for purposes other than the State approved purpose of use.

#### **I. Service and Reclamation Strategy Statement to Ensure Compliance With the Endangered Species Act**

The purpose of this section is to describe the specific commitments and strategy the Service and Reclamation agree to undertake in order to ensure all aspects of the CVP and the CVPIA, for which either agency has discretionary authority, are in compliance with the ESA. These are listed as follows:

1. Reclamation is committed to fully complying with the Endangered Species Act (ESA) with regard to the operation and maintenance of the CVP;
2. The Service and Reclamation are committed to fully complying with the ESA while implementing the CVPIA;
3. Consistent with their respective authorities and obligations concerning the effective and efficient operation of the CVP and implementation of CVPIA, the Service and Reclamation will utilize their authorities in furtherance of the purposes of the ESA by carrying out programs for the conservation of endangered and threatened species as provided in Section 7(a)(1) of ESA;
4. The Service and Reclamation will insure that their actions are not likely to cause jeopardy to the continued existence of any endangered or threatened species or result in the destruction or adverse modification of habitat designated as *critical* to such species as provided in Section 7(a)(2) of ESA;
5. The Service and Reclamation will identify and distinguish between actions taken to comply with ESA that are discretionary programs developed and implemented under authority of Section

7(a)(1), and actions determined to be necessary or appropriate to minimize impacts of CVP and CVPIA actions or developed as a reasonable and prudent alternative to a proposed CVP or CVPIA action in order to avoid causing jeopardy or destruction or adverse modification of designated *critical habitat* under authority of Section 7(a)(2);

6. Discretionary programs under authority of Section 7(a)(1) have been, or will be, developed by the Service and Reclamation in consultation with the Service and implemented to conserve listed species and address impacts resulting from past and continuing actions related to the operation and maintenance of the CVP and implementation of the CVPIA. The programs implemented pursuant to the CVPIA are intended to provide mitigation for past CVP effects on all fish, wildlife, and associated habitats, including listed species and designated *critical habitat*;

7. CVP or CVPIA actions or parts of actions, which *may affect* listed species or for which there is not enough information available to estimate *take* or make a *not likely to adversely affect* determination, will receive future tiered analysis and consultation. Reclamation or the Service will provide to the Service's SFWO Endangered Species Division, dependent on lead agency status, clear descriptions of proposed CVP or CVPIA actions, specific areas that may be affected directly or indirectly by these actions, the manner in which the actions *may affect* any listed species or designated *critical habitat*, and other relevant reports and information. Reclamation and the Service will also identify any and all interrelated and interdependent actions and measures related to the proposed CVP or CVPIA action. In those situations where the lead agency, or the Service's SFWO Endangered Species Division, determines that an action *may affect* listed species or may adversely modify designated *critical habitat*, Reclamation and/or the Service will initiate informal or formal consultation as appropriate.

8. Reclamation and the Service will work together to develop means to more effectively facilitate ESA compliance through the coordination of activities and commitments discussed in this Project Description. This coordination will include establishment of a process within 3 months of this biological opinion that will provide necessary information to the Service's SFWO Endangered Species Division in situations where a determination of *no affect* has been made, sufficiently in advance, to enable the Service's review. .

9. Based upon the best available scientific and commercial data, Reclamation and the Service, in coordination with the Service's SFWO Endangered Species Division, will prepare any biological assessment(s) necessary to determine whether the proposed CVP or CVPIA action is likely to *adversely affect* endangered or threatened species or designated *critical habitat* and whether formal consultation or conferencing is required;

10. For the renewal of long-term water service contracts, in order to expeditiously complete consultation with the Service, Reclamation will provide to the Service the best scientific and commercial data available during the consultation for an adequate review of the effects these actions may have upon listed species (50 CFR 402.14(d)) and will fulfill the information requirements specified in 50 CFR 402.14(c) at the time of initiation of consultation. To assure a

timely and affordable process, Reclamation will endeavor to reduce the number and extent of ESA consultations by consolidating similar renewal contract actions based on activity and geographical area;

11. Reclamation and the Service will collaboratively develop the priority and schedule for initiating and completing any ESA consultations determined by Reclamation and/or the Service to be necessary to address a CVP or CVPIA action that *may affect* a protected species and/or their habitat(s). Future CVP or CVPIA actions will be evaluated to assure necessary compliance with ESA as they arise;

12. Reclamation will work with the Service's SFWO Endangered Species Division to conduct a comprehensive review of the current status of all requirements specified in all previously issued biological opinions addressing contract renewal (e.g., Friant and Interim Contract Renewals). Such comprehensive review will also be conducted for any existing biological opinions which address CVP operations, maintenance and construction, to avoid inconsistent and duplicative reasonable and prudent alternatives, measures and implementing terms and conditions and monitor effectiveness, identify new or continuing conservation needs. The intent of such a review is to establish a tracking system for all ESA compliance activities related to the CVP; and

13. Reclamation will establish a tracking program to assure conditions necessary for compliance with ESA are met within areas affected by the delivery of CVP water. Where Reclamation and/or the Service believe there are *adverse effects* on listed species, a conservation strategy will be required to be in place for the district or area to receive the contract water. The types of strategies that could be accepted are: *Habitat Conservation Planning*, as described in Section 10(a) of the ESA; requirements resulting from a Section 7 consultation, programmatic land management actions that include protection of listed and proposed species, implementation of site specific *conservation measures*, or an expansion of the existing CVP Conservation Program that adequately compensates for the direct and indirect effects of increased water delivery to an area. Other actions that include components of the above strategies could also be accepted.